

Reliant M™



Product Description

D-A Reliant M™ is a technologically-advanced heavy-duty diesel engine oil, designed to provide extra protection against deposits and wear for engines operating in heavy duty service. D-A Reliant M is recommended for diesel engines requiring an engine oil meeting API Service Categories CI-4+, CI-4, CH-4, CF, CD, CE, SH, SJ, SL, Cummins CES 20078, Mack EO-N Premium Plus '03, Detroit Diesel Power Guard 93K214, CAT ECF-1a and Volvo VDS-2. Innovative concepts have been incorporated into D-A Reliant M to provide efficient equipment operation and improved component durability.

Reliant M is blended from only US refined high-quality base oils treated with D-A's ChemGuard™ additive system. Reliant M contains just the right combination of active diesel detergents and dispersants, antiwear agents, and oxidation, rust, and corrosion inhibitors.

Product Features and Benefits

Carefully selected base oils designed for diesel engine service provide:

- *reduced oil consumption*
- *improved control of engine wear through rapid oil flow on cold starts*
- *proper metal-to-metal separation during high temperature, high load operation.*

Reliant M can be used in selected powershift transmissions. *It protects against clutch plate glazing, providing longer transmission life with less slippage.*

Contains high dosage of active diesel detergents to *keep internal engine parts clean and operating efficiently.*

Meets service requirements of mixed heavy-duty diesel fleets while *satisfying gasoline engine service requirements.*

Resistance to in-service viscosity loss *provides excellent viscosity protection under tough service conditions. Reduces operating costs.*

Precise product balance for *optimum performance for reduced maintenance expense and compliance with engine manufacturer warranty service requirements.*

Service Applications

ACEA Service Categories E-5, E-3, E-2, A-3, A-2, B-4 and B-3.

API Service Categories CI-4+, CI-4, CH-4, CF, CD, CE, SH, SJ and SL.

Cummins CES 20078.

Detroit Diesel Power Guard 93K214.

Engine oil lubricated transmissions.

Hydraulic systems, where engine oil is permitted.

Mack EO-N Premium Plus '03.

Meets Allison C-4 and Caterpillar CD/TO-2.

Meets Caterpillar ECF-1a.

Volvo VDS-2.

Typical Properties:

SAE Viscosity Grade 15W-40

Viscosity

@ 100 °C, cSt 15.0
@ 40°C, cSt 112

Viscosity Index 136

Cold Cranking Viscosity — ASTM D5293 (SAE Grade Maximum: 5W- = 6600 cP, 10W- and 15W- = 7,000 cP, 20W- =9,500 cP)

@ -15°C, cP —
@ -20°C, cP 6,600
@ -25°C, cP —
@ -30°C, cP —

Cold Pumping Viscosity — ASTM D4684 (SAE Grade Maximum: All Grades = 60,000 cP)

@ -20°C, cP —
@ -25°C, cP <20,000
@ -30°C, cP —
@ -35°C, cP —

Borderline Pumping Temperature — ASTM D3829

Maximum °F, (°C) -4 (-20)

High Temperature/High Shear Viscosity Stability

@ 150°C, TBS, cP 4.2

Flash Point, COC, °F(°C) 430 (221)

Gravity, API 27.6

Sulfated Ash, Wt. % 1.5

Total Base Number

ASTM D2896 11

**To Order D-A Products, Call 1-800-OIL-LUBE (1-800-645-5823)
Or Fax Orders to (317) 923-3884**

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